Airborne Wind Energy System Modelling, Control and Optimisation

Fact Sheet

Project Information

**AWESCO**

Grant agreement ID: 642682

Project website

**Start date**

1 January 2015

**End date**

31 December 2018

**Funded under**

H2020-EU.1.3.1.

**Overall budget**

€ 2 990 467,20

**EU contribution**

€ 2 990 467,20

**Coordinated by**

TECHNISCHE UNIVERSITEIT DELFT

Netherlands

Objective

The height of conventional wind turbines is limited by the enormous stresses on the structure. The idea of the Airborne Wind Energy (AWE) is to replace the most efficient part of a conventional wind turbine, the tip of the turbine blade, with a fast flying high efficiency kite, and to replace the rest of the structure by a tether which anchors the kite to the ground. Power is generated either by periodically pulling a ground based generator via a winch, or by small wind turbines mounted on the kite that exploit its fast cross wind motion. While the concept is highly promising, major academic and industrial research is still needed to achieve the performance required for industrial deployment. This can best be done by innovative junior researchers in a closely cooperating consortium of academic and industrial partners. The ITN AWESCO combines six interdisciplinary academic and four industrial network partners with seven associated partners, all selected on the basis of
excellence and complementarity. All partners work already intensively on AWE systems, several with prototypes, and they are committed to create synergies via the cooperation in AWESCO. The main task is to train fourteen Early Stage Researchers (ESRs) in training-by-research and to create a closely connected new generation of leading European scientists that are ready to push the frontiers of airborne wind energy.

AWESCO is the first major cooperation effort of the most important European actors in the field and will help Europe to gain a leading role in a possibly huge emerging renewable energy market, and to meet its ambitious CO2 targets. In addition, the AWESCO early stage researchers will be trained in cutting-edge simulation, design, sensing, and control technologies that are needed in many branches of engineering.

**Field of science**

/engineering and technology/environmental engineering/energy and fuels/renewable energy/windpower
/engineering and technology/environmental engineering/energy and fuels/renewable energy

**Programme(s)**

**Topic(s)**

**Call for proposal**

H2020-MSCA-ITN-2014

**Funding Scheme**

MSCA-ITN-ETN - European Training Networks

**Coordinator**

**TECHNISCHE UNIVERSITEIT DELFT**

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<td>Higher or Secondary</td>
<td>€ 510 748,56</td>
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**Address**

Stevinweg 1
2628 CN Delft
Netherlands

Website

Contact the organisation
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<td>Luisenweg 40 20537 Hamburg</td>
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ENERKITE GMBH
Germany
EU contribution
€ 249 216,48
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Fichtenhof 5
14532 Kleinmachnow
Activity type
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(excluding Higher or Secondary Education Establishments)

HOCHSCHULE FUR ANGEWANDTE WISSENSCHAFTEN MUNCHEN
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Partners (7)

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Batiment Ce 3316 Station 1
Activity type
Higher or Secondary
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| Fraunhofer-Institute for Wind Energy and Energy System Technology | Germany | }